UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/914,335	12/27/2001	Thierry Grenot	01-515	2366

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EXAMINER
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ART UNIT	PAPER NUMBER
2662	

DATE MAILED: 03/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

Office Action Summary	Application No.	Applicant(s)
	09/914,335	GRENOT, THIERRY
	Examiner	Art Unit
	Hanh Nguyen	2662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *Amendment filed on 1/7/04* .

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *13-28* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *22 and 24* is/are allowed.

6)☒ Claim(s) *13,14,17,21,23 and 26-28* is/are rejected.

7)☒ Claim(s) *15, 16, 18-20 ,22,24 and 25* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____ .

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Objections

Claims 14-21 are objected to because of the following informalities:

In claims 14-16, "A method" on line 1 respectively should have been changed to "The non-instrusive method" for terminology consistency.

In claim 17, line 18, it is not clear to what "said one ticket" is referred. " said one ticket" is lack of antecedant basis. Therefore, the indicated allowability of claim 17 in the previous office action is withdrawn.

In claims 18-21, "A method" on line 1 respectively should have been changed to "The non-instrusive method" for terminology consistency.

In claim 21, it is not clearly stated what contents is considered as a "type" for the respective data paccket. Generally, according to the MPEP, a "type" of something is considered indefinite.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 13, 17, 21, 23, 26 are rejected under 35 USC 103(a) as being unpatentable over

Diebboll. et al. (US Pat. No. 5,886,643) in view of **Takase et al.** (US Pat. No. 5,042,027), and

further in view of **Fletcher et al.** (US Pat. No. 6,321,264 B1) .

In claims 13, 17, 21 and 26, **Diebboll. et al.** discloses, in Fig.1, a plurality of real time

probes 20 (synchronous probes) distributed in a multi-segment network 10 (plurality of

observing probes distributed at different points in the network). See col.4, lines 22-35. The

probes 20 periodically analyzes packets transmitted between source nodes and destination nodes

and transmits the results to a network management system 40 (transmitting measurement results

to a collector module). The analyzed results, which is described in Fig.2, comprising delta T field

90 specifying period of time for which packets were gathered (dating data packets); packet field

82 specifying number of packets sent by source nodes (counting data packets); source fields 76

and destination field 78 (identifying data packets). See col.6, lines 30-50. **Diebboll. et al.** does

not disclose probes measuring packet loss rate; classifying data packets in a flow; measuring

unidirectional transfer duration; and performing correlation between measurement results.

Takase et al. discloses, in Fig.1, traffic measurment device 17a (a probe computer)

measuring packet loss rate (measuring packet loss rate) for traffic between terminal 13a, 13b (

per flow). See col.5, lines 15-45. The measured results are stored in database 15 of network

controller 14 (collector).

Fletcher et al. discloses, in Fig.1, that probes 140, 142 filter and count passing packets

based upon type of data packet, characteristic associated with data contained within the packets (

Classifying packets). See col.3, lines 5-20. **Fletcher et al.** further discloses, in Fig.4, that a

network latency (measuring unidirectional transfer duration) is measured for packet to travel

from client 300 to server 350 (See col.8, lines 20-35). In Fig.5, server 350 comprises a

correlation table 525 which correlates different time stamps in packets (performing correlation

between measured time stamp in the packets). See col.9, lines 25-55.

Therefore, it would have been obvious to one ordinary skill in the art to combine

Fletcher et al. , Takase et al. with Diebboll. et al. to classify data packets in a flow, count data

packet in a flow, and determine loss rate for data packet and correlation measurement results.

The motivation is to determine when the packets are transmitted and received.

In claim 23, **Diebboll. et al.** does not disclose mapping operations observed by several of

probes. **Fletcher et al.** discloses the network latency from client computer 300 to server 350 is

determined by computing the difference between time stamps T2 and T1 (mapping operations

observed by several of probes) See col.8, lines 30-35. Therefore, it would have been obvious to

one ordinary skill in the art to combine use the time stamps computing of **Fletcher et al.** as a

mapping operation in calculating transfer duration.

Claims 14 and 27 are rejected under 35 USC 103(a) as being unpatentable over

Diebboll. et al. (US Pat. No. 5,886,643) in view of **Takase et al.** (US Pat. No. 5,042,027), in

view of **Fletcher et al.** (US Pat. No. 6,321,264 B1), and further in view of **Ennis, Jr. et al.** (US

Pat. No. 5,521,907).

In claims 14 and 27, **Diebboll. et al.** does not disclose calculating an identification

signature on packet contents for each packet. **Ennis, Jr. et al.** discloses packet identifier

generated by microprocessor 36 comprises packet signatures (packet signatures contents in data

packets). See col.4, lines 20-23. Therefore, it would have been obvious to one ordinary skill in

the art to implement the probe computer of **Diebboll** to calculate packet signature for arriving at the claimed limitation.

Claim 28 is rejected under 35 USC 103(a) as being unpatentable over **Diebboll. et al.** (US Pat. No. 5,886,643) in view of **Takase et al.** (US Pat. No. 5,042,027), in view of **Fletcher et al.** (US Pat. No. 6,321,264 B1), and further in view of **Geiger** (US Pat. No. 5,701,302).

In claim 28, **Diebboll et al.** does not disclose the probe compressing the measurements before transmitting said measurements to the collecting module. **Geiger** discloses a first communication device 107 (a probe, see Fig.1) generates data packets 201-207 (see Fig.2), and selects some of the data packets 202-205 (see Fig.2) for performing compression of each selected data packet. The first device 107 transmits the compressed data packets to a second device 108 (see Fig.1). See Abstract (the probe compressing the measurements before transmitting said measurements to the collecting module). Therefore, it would have been obvious to use the packet compression of **Geiger** into the **Diebboll et al.** to transmit the compressed packet to the collection module. The motivation is to speed up the transmission.

Response to Arguments

Applicant's arguments with respect to claims 13, 14, 17, 21, 23 and 26-28 have been considered but are moot in view of the new ground(s) of rejection.

Allowable Subject Matter

Claims 15-16, 18-20 and 25 are objected to as being dependent upon a rejected base

claim, but would be allowable if rewritten in independent form including all of the limitations of

the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

In claim 15, the prior art does not disclose observed data packet is dated in accordance

with absolute time reference fained by the observing probes.

The statement of reason indicating allowability for claims 18-20 and 25 were addressed

in the previous office action.

Claims 22 and 24 are allowed over the prior art.

The following is a statement of reasons for the indication of allowable subject matter:

In claim 22, the prior art does not disclose the transfer duration of a given flow F is

carried out as follows: $D_{es}(p) = Hs(p) - He(p)$

where $D_{es}(p)$ is a transfer duration from an entry point (e) to an exit point (s) for a

received data packet (p); He(p) is a first time stamping in a ticket associated with the respective

data packet (p) by one of said probes at the entry point ; and Hs(p) is a second time stamping in

the ticket associated with the respective data packet (p) by said one of said probes at the exit

point.

In claim 24, the prior art does not disclose the loss rate for a given flow comprising

calculating a number Pes(pq) of said data packets lost in the network between a passage of two

data packets designated p and q according to the following formula: $Pes(pq) = Ne(pq) - Ns(pq)$

Where Ne(pq) = number of data packets between the passage of the packets p and q at an

exit point; and Ns(pq) = number of packets between the passage of the packets p and q at an

entry point.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

Rosborough et al. (US Pat. No. 6,308,211 B1) discloses Method and Apparatus for

Identifying Information Packets.

Tams et al. (US pat. No. 6,327,620 B1) discloses method and Apparatus for Collecting ,

Storing , Processing aand using Network Traffic Data.

Zhang et al. (US pat. No. 5,535,193) discloses Multiport Analyzing with Time Stamp
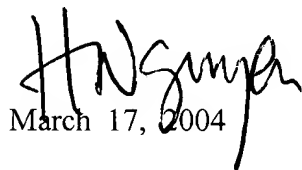
Synchronizing.

De La salle (US pat. No. 6,144,961) discloses Method and System for Non-Intrusive

Measurement of Transaction Response Times on a Network.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Hanh Nguyen whose telephone number is 703 306-5445. The

examiner can normally be reached on Monday-Friday from 8:30 to 5:30. The examiner can also

be reached on alternate

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Hassan Kizou, can be reached on 703 306 4744. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hanh Nguyen

March 17, 2004